

# Situational Awareness in Amateur Radio

Military technology offshoot brought to amateur radio in 1992 by Bob Bruninga, WB4APR

# APRS means

- Automated Packet Reporting System
- Amateur radio Internet of Things (IoT)
- What can a “packet” report?

# Bulletins

- G6UIM BLN0 GB7UIM BBS active on 144.950 and telnet,www
- KC1HHO-9 BLN3 EASTERN MA 2M Traffic Net Daily 2000 hrs 145.230 pl 88.5
- KC1HHO-9 BLN4 Great Hill Gang HAM Radio meet up date Feb.20 Wey.MA Call 146.520

# Bulletins

- PI1APA BLN0 PI1APA is the APRS digipeater and igate of Apeldoorn (The Netherlands).
- PI1APA-1 BLN0 Normal levels of radioactivity: (20 CPM)
- WXSVR-AU BLN1 Send a message to WXSVR-AU for a weather forecast at your location.

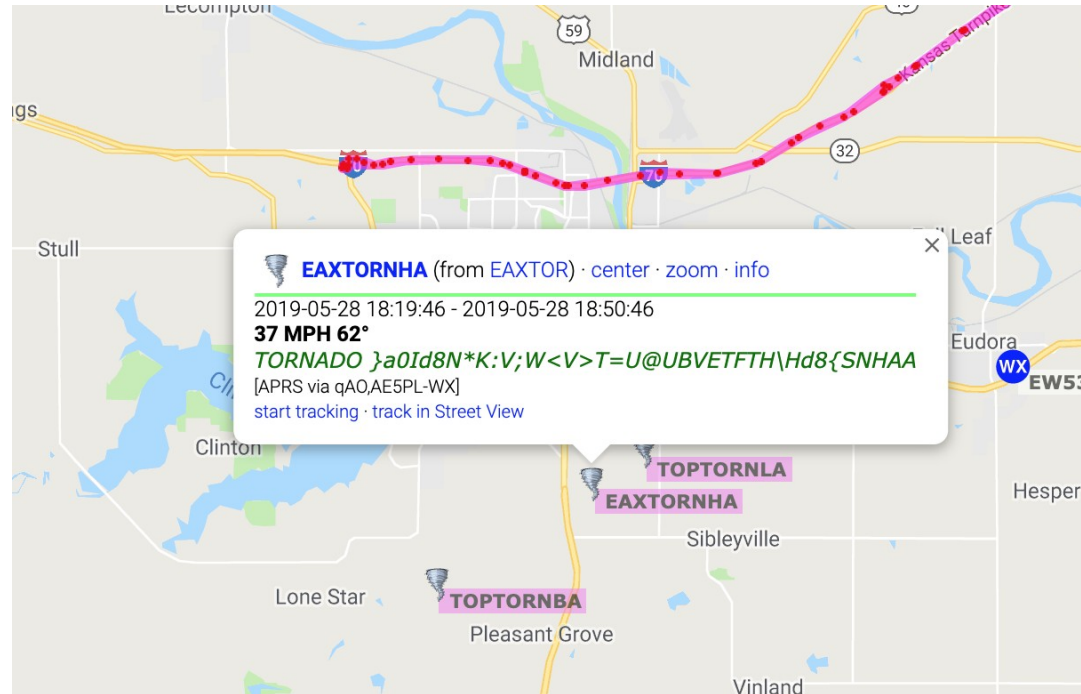
# Announcements

- CT1EBQ BLNP Propagation - SFI:72 A:8 K:2  
No Storms -> No Storms
- PY5BK BLNR The best APRS Raspberry Image:  
<http://bitbaru.com/site/ham-raspberry-server>
- W0ILO BLNB Repeaters (W0ILO) 145.350-  
444.875+ 146.760- T123

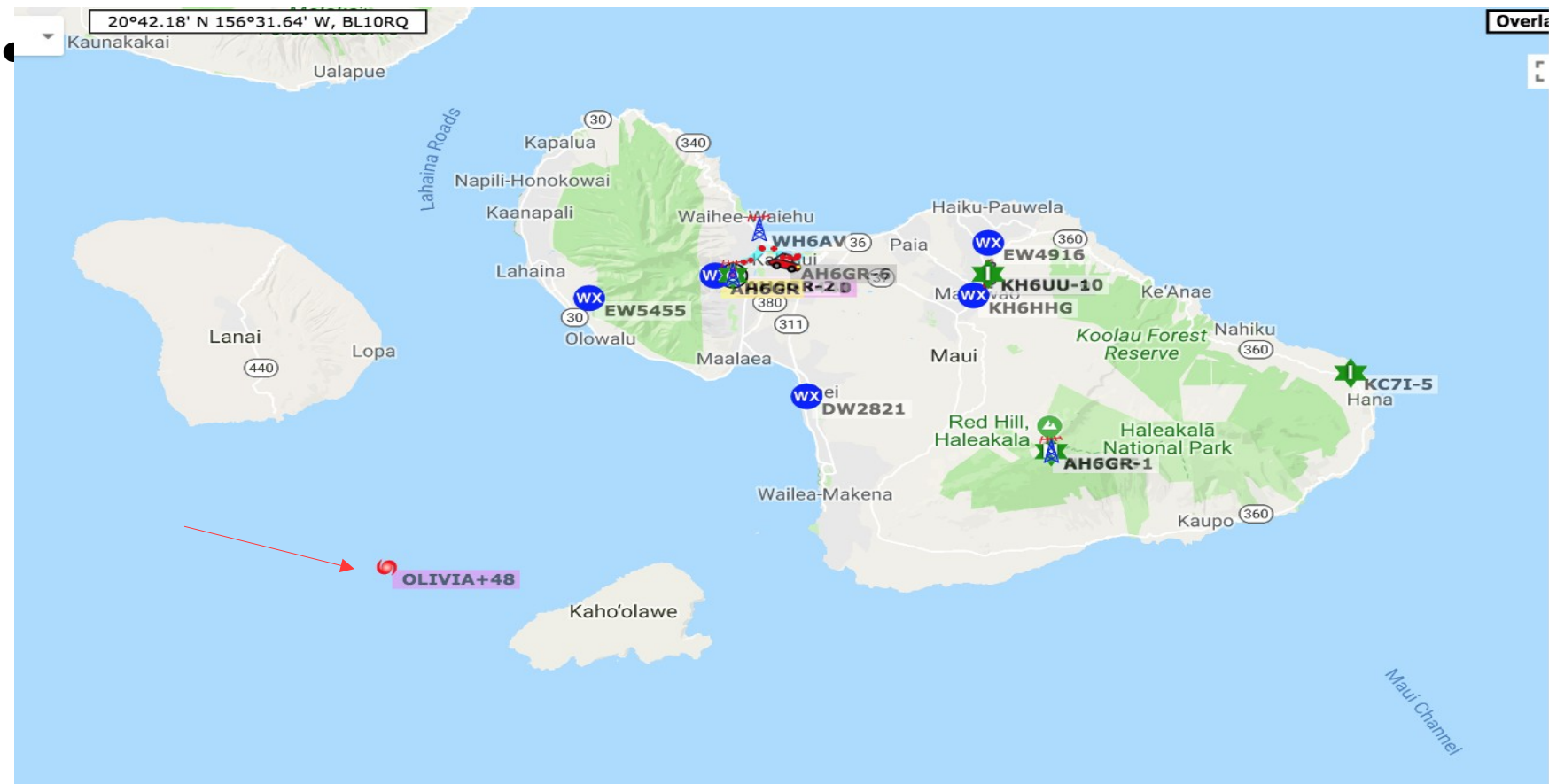
# Weather Bulletins

- VE3LSR-4 BLN1WX03 squall warning ended  
19h7m
- VR2ZDX-10 BLN0HKG Yellow Fire warning is  
in force

# Mapping – Tornado on the Ground

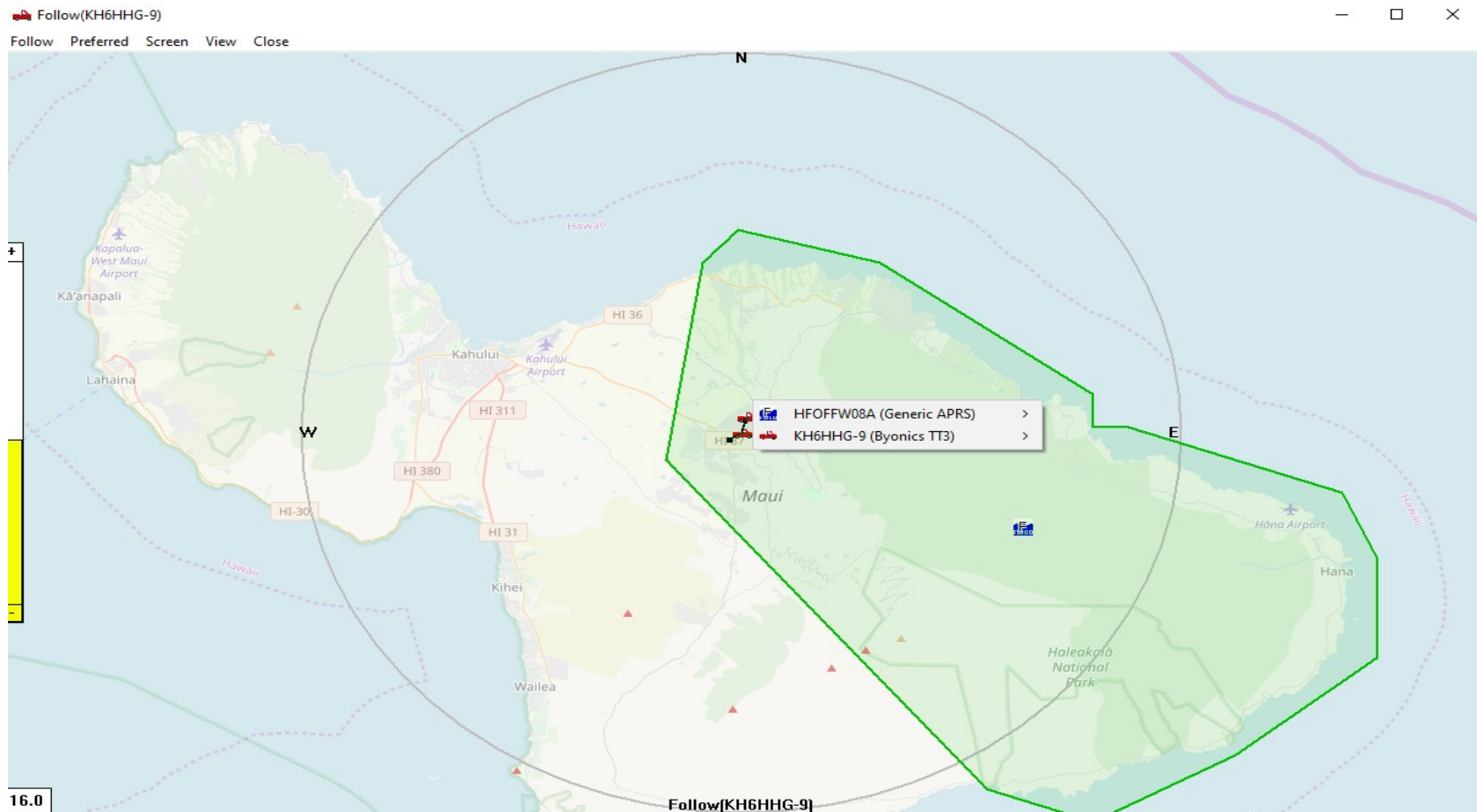


# Mapping – Hurricane Forecast





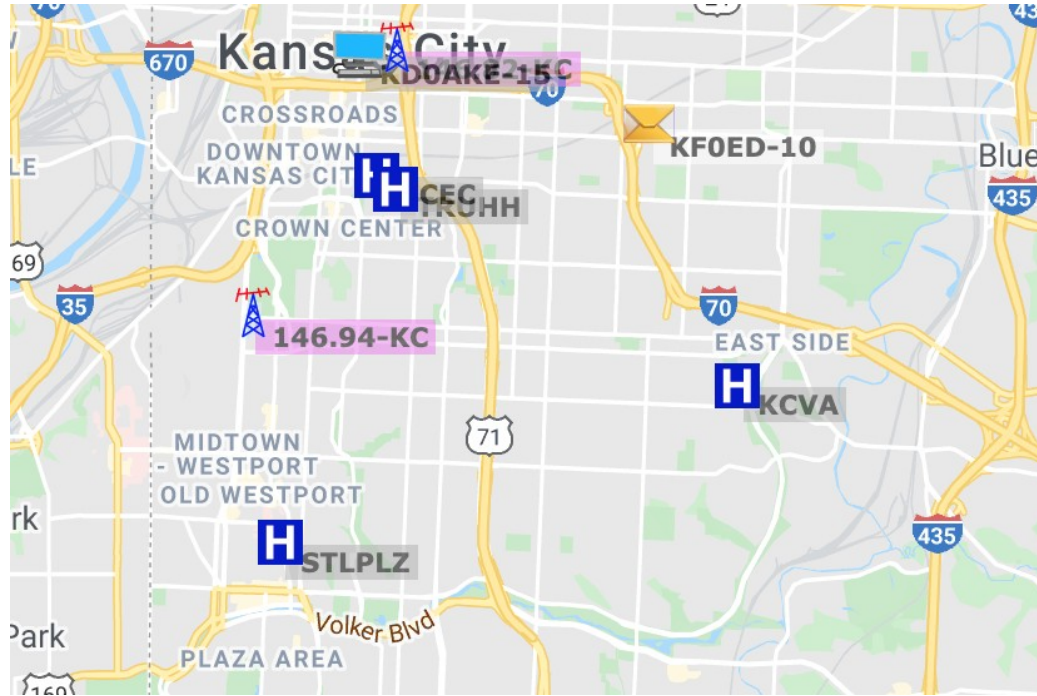
# Mapping – Flash Flood Warning



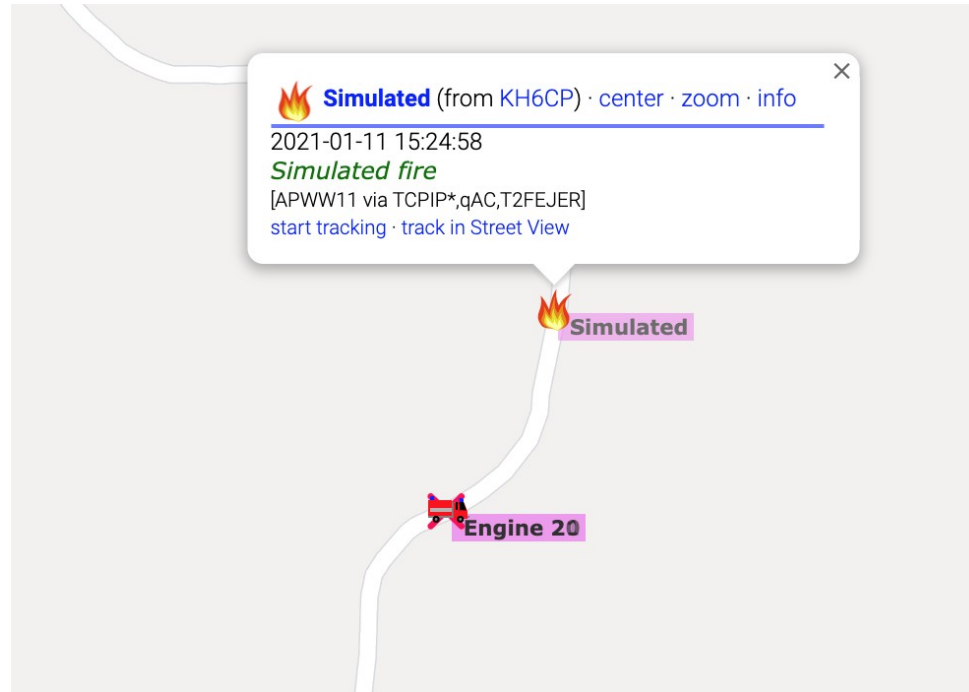
# Mapping – Medical Resources



# Mapping – Hospitals and Resources



# Mapping - Fires



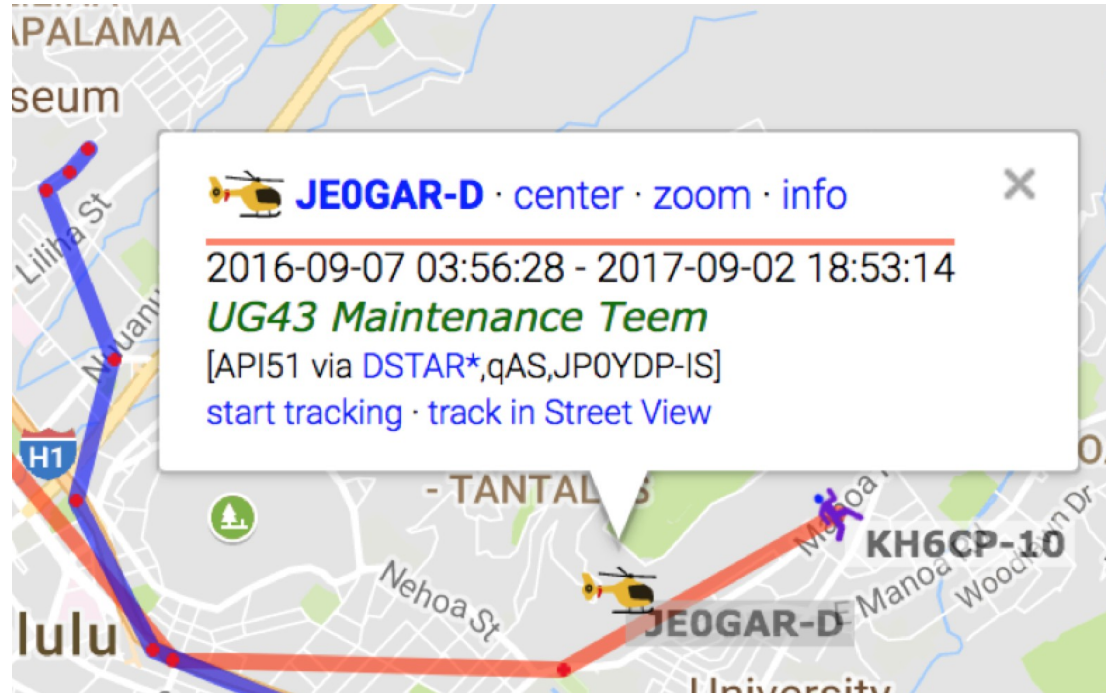
# Mapping – Boots on the Ground/Net Check-in



# Mapping - Proximity

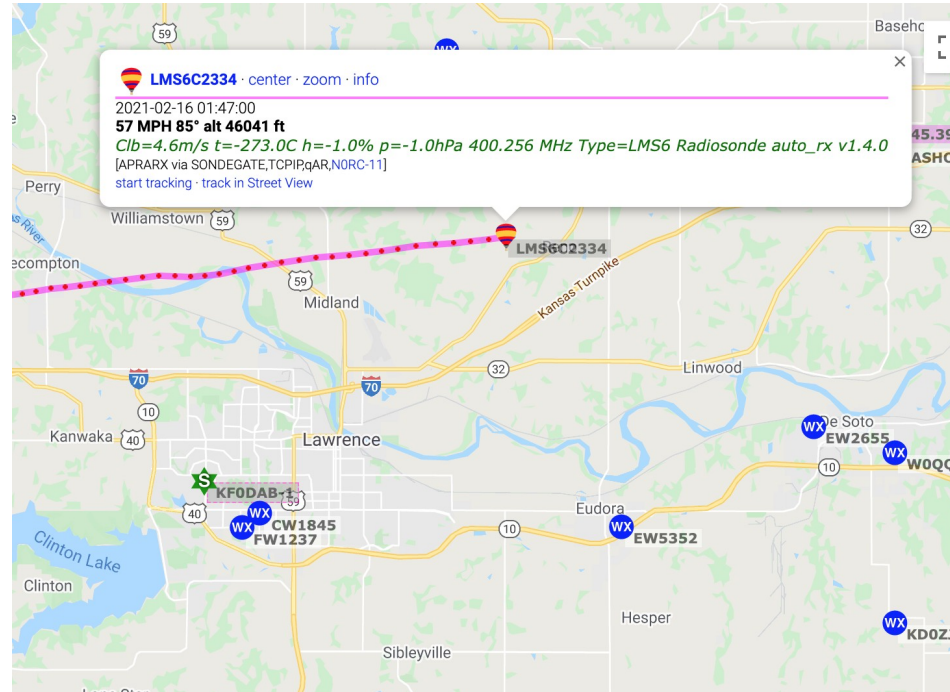


# Mapping – Air Support





# Mapping – Balloon





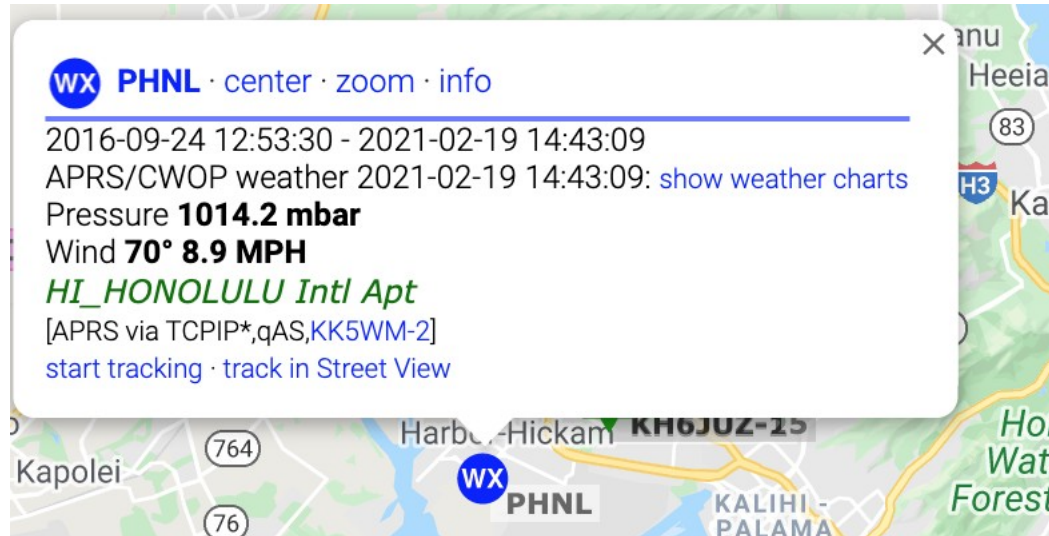
# Mapping – Fresh Water Distribution Truck



# Mapping - EOC



# Mapping - Weather



**WX PHNL** · [center](#) · [zoom](#) · [info](#)

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2016-09-24 12:53:30 - 2021-02-19 14:43:09  
APRS/CWOP weather 2021-02-19 14:43:09: [show weather charts](#)

Pressure **1014.2 mbar**  
Wind **70° 8.9 MPH**

**HI\_HONOLULU Intl Apt**  
[APRS via TCPIP\*,qAS,KK5WM-2]  
[start tracking](#) · [track in Street View](#)

# Weather History

**WX PHNL** · [center](#) · [zoom](#) · [info](#)

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The background shows a map of Honolulu with labels for Kapolei, Harbor, Hickam, KALIHI, PALAMA, Heeia, and Horowaka Forest. A blue circle with 'WX PHNL' is visible on the map. A red arrow points from the bottom right of the popup towards the 'show weather charts' link.

# Mapping - Telemetry

 **KH6DH-13** · [center](#) · [zoom](#) · [info](#)

2021-02-19 14:45:10

**alt 420 ft**

APRS/CWOP weather 2021-02-19 14:45:36: [show weather charts](#)

Temperature **82°F**

Wind **118° 2.9 MPH** (Gusts **14.1 MPH**)

Rain **0.0 inches/1h 0.0 inches/24h 0.0 inches/since midnight**

Telemetry 2021-02-19 14:37:27: [show telemetry](#)

Ch 1: 133, Ch 2: 116, Ch 3: 255, Ch 4: 86, Ch 5: 66

*/TinyTrak4 Alpha>116F*











*/TinyTrak4 Alpha beacon*

Mic-E: *In service*

[R1QWUW via WIDE1-1,WIDE2-1,qAO,KH6MP-1]


[start tracking](#) · [track in Street View](#)

# Station Icon Meaning

WH7ID-7		4.0 miles 310°	2021-02-19 13:19:49	AH6HI-2		4.3 miles 297°
KH6HY B		4.4 miles 301°	2021-02-19 14:55:46	KH6HY-B		4.4 miles 301°
Stations which heard <b>KH6MP-1</b> directly on radio - 2021-02 ▾						
callsign		pkts	first heard - HST	last heard	longest	
KH6CP		9	2021-02-03 15:55:35	2021-02-05 16:15:37	BL11CG > BL11CK	
WH6FQE-3		3	Digipeater (white center)		3 11:55:35	BL11CG > BL11AJ
KH6BFD-1		379	2021-02-12 13:35:43	2021-02-19 13:45:50	BL11CG > BK29BQ	
KH7UK		168	2021-01-31 14:15:33	2021-02-15 06:05:46	BL11CG > BL11CH	
AH6HI-2		1	2021-02-02 20:45:35	2021-02-02 20:45:35	BL11CG > BL11BH	
KH6JUJ-15		1506	2021-02-01 03:15:33	2021-02-19 14:55:50	BL11CG > BL11AI	

Only position packets which were originated by the station are shown here. The range si

# Station Packet Rate

APRS station **KH6CP-1**  - [show graphs](#)

**Comment:**

**Last status:**

**Location:**

*Kaneohe HI*

*ULARI VHF7W APRS-IS*

*21°25.02' N 157°48.59'*

*0.4 miles West bearing*

*1.0 miles South bearing*

# Mapping - Shelters

- Warming
- Flood
- Hurricane
- Tornado
- Hazardous materials release



# Messaging

- Station to station
- Station to group
- Broadcast

# Messaging – Station to station

- KE6SLS-2>N6HGG-1: Welcome back to Humboldt!
- Text message to cell phone
- KO4HRW>SMSGTE: @864517xxxx Hello

# Message to Group

- ECMWW>BOMTEC: Strong Wind Warning for coastal waters between Northern Tip
- TECMWW>BOMTEC: of Flinders Island and Stanley and for Storm Bay for Friday

# Messaging Inbound

- Publish your station status via APRS containing the word “WINLINK” and APRS will tell you when you have new Winlink e-mail

# APRS Hardware/Software

- Kenwood APRS radios can send/receive broadcast messages
- Yaesu APRS radios can only receive broadcast messages
- Software programs have varying abilities
- Master is APRSIS32

# APRS Software

- APRSDroid for Android
- Use audio cable to radio or Bluetooth to send/receive and display maps (inexpensive)

# Internet Resources

- <https://aprs.fi> (interrogate worldwide)
- <http://www.aprs.org> (master docs)

# These are just some of the uses

- Questions? Ask [carcarx@gmail.com](mailto:carcarx@gmail.com)